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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/771,440

02/05/2004

Michal Daniely

26003

3178

67801

7590

12/11/2008

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.

P.O. BOX 16446

ARLINGTON, VA 22215

EXAMINER

DUFFY, BRADLEY

ART UNIT

PAPER NUMBER

1643

MAIL DATE

DELIVERY MODE

12/11/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/771,440	Applicant(s) DANIELY ET AL.	
	Examiner BRADLEY DUFFY	Art Unit 1643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37,39,40,54,55,57,72 and 73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 37,39,40,54,55,57,72 and 73 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>4/9/08</u> . | 6) <input checked="" type="checkbox"/> Other: <u>PTO-90C: Decision</u> . |

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10771440	2/5/2004	DANIELY ET AL.	26003

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EXAMINER

BRADLEY DUFFY

ART UNIT	PAPER
1643	20081201

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

In re application of Daniely et al.
Serial No. : 10/771440
Filed: February 5, 2004

DECISION ON PETITION

This is in response to applicants' petition, filed on 8/15/2008 under 37 CFR 1.84(a), to accept color drawings.

Applicant has fulfilled all requirements of 37 CFR 1.84(a).

Applicants' petition is GRANTED.

/Larry R. Helms/
Supervisory Patent Examiner
Art Unit 1643

DETAILED ACTION

1. The amendment filed August 15, 2008, is acknowledged and has been entered. Claims 37, 55, 72 and 73 have been amended. Claims 74-81 have been canceled.
2. Claims 37, 39-40, 54-55, 57 and 72-73 are pending in the application and are under examination.

Drawings

3. Receipt of the replacement drawings filed August 15, 2008, is acknowledged. These drawings are acceptable.

Information Disclosure Statement

4. The references cited in the information disclosure statement filed on April 9, 2008, have been considered. In this case, while considered, reference 11 was previously made of record by the Examiner. Accordingly, this duplicate citation was crossed out. Furthermore, while considered, reference 22 does not contain a date in its citation, and therefore, does not comply with the information disclosure statement requirements (see MPEP 609). Accordingly, this citation was crossed out. Applicant is invited to submit a new information disclosure statement citing reference 22 which complies with the disclosure statement requirements for further consideration, if so desired.

Grounds of Objection and Rejection Withdrawn

5. Unless specifically reiterated below, Applicant's amendment and/or arguments filed August 15, 2008, have obviated or rendered moot the grounds of objection and rejection set forth in the previous Office action mailed March 20, 2008.

Grounds of Rejection Maintained

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. The rejection of claims 37, 39-40, 55, 57 and 72-73 under 35 U.S.C. 102(b), as being anticipated by Skacel et al (of record), is maintained.

At page 10 of the amendment filed August 15, 2008, Applicant has traversed this ground of rejection.

Applicant's arguments have been carefully considered but not found persuasive for the following reasons:

As amended, the claims recite methods comprising:

(a) staining nucleated cells of a urine sample using a stain selected from the group consisting of May-Grunwald-Giemsa, Giemsa, Papanicolaou and Hematoxylin-Eosin to thereby obtain stained nucleated cells so as to identify a single cell having a morphological abnormality associated with transitional cell carcinoma, and;

(b) staining said stained nucleated cells resultant of step (a) using fluorescent in situ hybridization (FISH) so as to identify a chromosomal abnormality associated with said transitional cell carcinoma in said single cell, and;

(c) imaging said stained nucleated cells resultant of steps (a) and (b) so as to obtain images of said stained nucleated cells, and;

(d) identifying in said images said single cell having said morphological abnormality and said chromosomal abnormality (see e.g., claims 37 and 55)

or methods comprising:

(a) staining nucleated cells of a urine sample using a stain selected from the group consisting of May-Grunwald-Giemsa, Giemsa, Papanicolaou and Hematoxylin-Eosin to thereby obtain stained nucleated cells so as to identify a single cell having a morphological abnormality associated with transitional cell carcinoma, and subsequently;

(b) imaging said stained nucleated cells resultant of step (a) so as to obtain images of said stained nucleated cells; and subsequently;

(c) staining said stained nucleated cells resultant of step (a) using fluorescent in situ hybridization (FISH) so as to identify a chromosomal abnormality associated with said transitional cell carcinoma in said single cell, and; subsequently;

(d) imaging said stained nucleated cells resultant of step (c) so as to obtain images of said stained nucleated cells; and subsequently;

(e) simultaneously viewing said images stained nucleated cells resultant of steps (b) and (d), and;

(f) identifying in said images said single cell having said morphological abnormality and said chromosomal abnormality (see claims 72 and 73).

Notably, while the claims have been amended to recite that the staining steps have the intent “so as to identify a single cell having a morphological abnormality associated with transitional cell carcinoma” (italicized for emphasis) and “so as to identify a chromosomal abnormality associated with said transitional cell carcinoma in said single cell” (italicized for emphasis), respectively, because these process steps merely indicate that the disclosed process steps could be used in this manner to identify such single cells and do not expressly require the identification of a single cell having a morphological abnormality associated with transitional cell carcinoma and the identification of a chromosomal abnormality associated with said transitional cell carcinoma in the same single cell, the claims are broadly, but reasonably being interpreted to not require such identifying steps which occur after the phrase “so as to”.

By way of further explanation, the subject matter of a properly construed claim is defined by the terms that limit its scope. It is this subject matter that must be examined. As a general matter, the grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. See also MPEP 2111.02. In this case, the recited "so as to" clauses merely suggest one manner in which the claimed processes could be used, but the recited active steps which, e.g., recite imaging *all stained nucleated cells* do not expressly limit the recited process to identifying in the same single cell both a morphological abnormality and a chromosomal abnormality.

Additionally, as further explained in the below rejection of the claims under 35 USC 112, second paragraph, the recitation of identifying in said images said single cell having said morphological abnormality and said chromosomal abnormality, is indefinite because the images contain a plurality of single cells and it is unclear whether e.g., the same or different "single cells" are necessarily identified by this step. Accordingly, while the claims now recite "single cell", because the claims do not expressly limit the method to identifying a morphological abnormality and a chromosomal abnormality in the same single cell, the claims are broadly, but reasonably interpreted to continue to encompass methods that do not necessarily identify a morphological abnormality and a chromosomal abnormality in the same single cell.

Starting at page 10 of the response filed August 15, 2008, Applicant appears to be arguing that Skacel et al do not anticipate the amended claims because "the color images of Figures 2A-B in Skacel et al. demonstrate, beyond any doubt, that Figures 2A and 2B are photographs of two different microscopic fields which necessarily include different cells".

In response, while Figures 2A and 2B do not appear to depict images of the same exact cells, Skacel teaches that the same cells were both stained with Papanicolau and FISH stains and these same cells were imaged for both the Papanicolau and FISH stains because Skacel teaches in the figure legend of Figure 2,

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“[m]alignant transitional cells stained by Papanicolaou stain demonstrating gain of chromosomes 3, 7, and 17”. Presumably, based on this disclosure, the different images depicted in Figure 2A and Figure 2B are representative of different fields of the same slides on which the same cells were analyzed, as opposed to images that might have been acquired by analyses of different samples of cells altogether.

Accordingly, because, for the reasons explained above, the instant claims broadly, but reasonably encompass imaging different single cells for morphological abnormalities and chromosomal abnormalities as taught by Skacel, the processes of Skacel et al are deemed to remain materially and manipulatively indistinguishable from the claimed process and therefore, absent a showing of any difference, the process disclosed by the prior art is deemed to anticipate the claimed process. Notably, the processes of Skacel et al, could also be used “so as to” identify a single cell having a morphological abnormality associated with transitional cell carcinoma and “so as to” identify a chromosomal abnormality associated with said transitional cell carcinoma in a single cell, as suggested by the instant claims, because Skacel et al teach staining the same cells with Papanicolau and FISH stains.

Therefore, for these reasons and the reasons previously set forth, after careful and complete consideration of Applicant's response, the Examiner respectfully disagrees with Applicant's contention that the rejection has been overcome and the rejection of claims 37, 39, 40, 55, 57 and 72-73 under 35 U.S.C. 102(b) as being anticipated by Skacel et al (of record) is maintained.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. The rejection of claims 37 and 54 under 35 U.S.C. 103(a) as being unpatentable over Skacel et al (of record) in view of US Patent No. 6,418,236 (of record), is maintained.

At page 12 of the amendment filed August 15, 2008, Applicant has traversed this ground of rejection.

Applicant's arguments have been carefully considered but not found persuasive for the following reasons:

Applicant has argued that because the methods of Skacel et al pertain to different cells, that the combination of Skacel et al and US Patent No. 6,418,236 would not render the claimed invention obvious.

In response, this is not found persuasive, because as explained in the above rejection of the claims under 35 U.S.C. 102(b), Skacel et al teach methods of identifying

transitional cell carcinoma cells and methods of diagnosing bladder cancer by staining the same cells with a Papincolau stain and FISH probes as set forth in the figure legend of Figure 2 and the claims continue to broadly, but reasonably encompass methods that stain the same cells with Papincolau stain and FISH probes, but which view different cells as taught by Skacel.

Therefore, the Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to identify transitional cell carcinoma cells or diagnose bladder cancer from a urine sample, by staining nucleated cells of a urine sample by the methods of Skacel et al and imaging the same stained cells with the automated microscope capable of dual imaging as taught by US Patent 6,418,236 to identify transitional cell carcinoma cells or diagnose bladder cancer. Notably, there is an advantage and reasonable expectation of success in practicing such methods because as set forth in the Office action mailed 12/27/2006 at page 15 ““automated imaging analysis” eliminates the need for operator input to locate biological objects or areas of interest for analysis” as taught by US Patent 6,418,236 (see column 8, lines 30-32)” and because the imaging device taught by US Patent 6,418,236 is capable of dual imaging of the same cells on the same sample.

For these reasons, after careful and complete consideration of Applicant's response, the Examiner respectfully disagrees with Applicant's contention that this rejection had been overcome and the rejection of claims 37 and 54 under 35 U.S.C. 103(a) as being unpatentable over Skacel et al in view of US Patent No. 6,418,236 is maintained.

New Grounds of Rejection

Claim Rejections - 35 USC § 112

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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12. Claims 37, 39-40, 54-55, 57 and 72-73 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In this case, the claims are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in the recitation of "identifying in said images said single cell having said morphological abnormality and said chromosomal abnormality in claims 37, 55, 72 and 73. This recitation renders the claims indefinite because the claimed processes recite imaging a plurality of stained nucleated cells, i.e., a plurality of single cells, so it is unclear which "single cell" is necessarily identified. Notably, because said images contain a plurality of cells, the limitation of identifying "said single cell" in said images lacks proper antecedent basis in the claim. Therefore, it is unclear which, if any, "single cell" is being necessarily identified in said images. For example, is the same "single cell" identified as having a morphological abnormality and as having a chromosomal abnormality, is a "single cell" identified as having a morphological abnormality, while a different "single cell" is identified as having a chromosomal abnormality, or is some other "single cell" necessarily identified by this step? Without knowing which "single cell" is being referred to in the image which contains a plurality of stained nucleated cells the claims cannot be construed unambiguously. Therefore, the claims fail to delineate the subject matter that Applicant regards as the invention with the requisite degree of clarity and particularity to permit the skilled artisan to know or determine infringing and non-infringing subject matter and thereby satisfy the requirement set forth under 35 U.S.C. § 112, second paragraph.

Conclusion

13. No claim is allowed.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hailing et al (of record) discloses a method of identifying transitional cell carcinoma cells and diagnosing bladder cancer in cells stained with

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FISH stains. Bubendorf et al (of record) discloses a method of identifying transitional cell carcinoma cells and diagnosing bladder cancer in cells stained with standard Papanicolaou stain or FISH stains. Darzynkiewicz et al (of record) discloses an automated cell-imaging device capable of dual imaging. Shimoni et al (of record) discloses an automated cell-imaging device capable of dual imaging of cells stained with a May-Grunwald-Giemsa stain and FISH probes. Boon et al (of record) discloses a method of identifying transitional cell carcinoma cells and diagnosing bladder cancer in cells stained with a Giemsa stain or a Papanicolaou stain. Otto et al (of record) discloses a method of identifying transitional cell carcinoma cells and diagnosing bladder cancer in cells stained with a Hematoxylin stain and an Eosin stain.

15. Applicant's amendment necessitated the new ground(s) of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brad Duffy whose telephone number is (571) 272-9935. The examiner can normally be reached on Monday through Friday 7:00 AM to 4:30 PM, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Helms can be reached on (571) 272-0832. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Respectfully,
Brad Duffy
571-272-9935

/Stephen L. Rawlings/
Primary Examiner, Art Unit 1643

/bd/
Examiner, Art Unit 1643
December 2, 2008